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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,612	12/20/2001	David M. Fullmer	9D-WP-19718	9074

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/026,612	Applicant(s) FULLMER ET AL.
	Examiner Minh-Chau T. Pham	Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DUANE SMITH
PRIMARY EXAMINER

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-5, 7, 8 and 31-33 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17).

Chau discloses a water softener system comprising a hard water flow pipe through which hard water flows, a modular water softener assembly comprising an elongated tube, a first end cap coupled to the tube, a regeneration tank in flow communication with the water softener assembly containing regenerating water softening particles, and a riser pipe extending longitudinally within the water softener tube comprising a distributor end. Chau also discloses a method for installing a modular water softener assembly comprising the steps of providing the hard water flow pipe, providing the outlet pipe through which soft water flows, and installing the water softener assembly. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a water softener system as taught by Chau to provide a fluid treatment system with a water softening mechanism so that the hard water can be effectively treated by flowing down via gravity and pressure through the ion exchange medium.

2. Claim 6 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and

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line 45 through col. 6, line 17), as applied supra to paragraph 2 above, in view of Nowlin et al (5,464,532; 10, 12, 14, 16 & 26 in Fig. 1; col. 2, lines 13-46).

Claim 6 call for the water softening resin beads forming a water softening resin bed. Nowlin et al disclose the water softening resin beads forming a water softening resin bed in a water softener system. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the water softening resin beads as taught by Nowlin et al in the water softener system of Chau since it is well known in the art that resin beads effectively remove hardness ions from the hard water to be processed.

3. Claims 9-14 and 34 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17), as applied supra to paragraph 2 above, in view of Lyall (3,385,441; col. 2, line 38 through col. 3, line 36).

Claims 9-14 and 34 call for the softening capacity ranging between 2,000 to 9,000 grain capacity. Lyall discloses a water softener system producing approximately 10 to 20 gallons of soft water starting with an influent hardness of approximately 20 grains per gallon. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a water softener system with the grain capacity as taught by Lyall in the water softener system of Chau since with this capacity the softener would receive sufficient water softening and treating material to provide sufficient soft water for the system.

Claim 13 calls for a "tube length of about 18 inches". The specification contains no disclosure of either the critical nature of this requirement or any unexpected results arising therefrom, and as such this requirement would be arbitrary and therefor obvious. Applicants must show that this requirement is critical. In re Woodruff, 16 USPQ 2d 1934.

4. Claims 15-30 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (6,090,285; 10, 14, 42 & 58 in Fig. 1; col. 5, lines 4-6; lines 26-37 and line 45 through col. 6, line 17), as applied supra to paragraph 4 above, in view of Lyall (3,385,441; col. 2, line 38 through col. 3, line 36), and further in view of Lim et al (4,518,505; Abstract; col. 1, lines 5-15 and lines 33-37; col. 7, lines 20-32 and lines 43-53).

Claims 15-30 call for a water heater to heat water in the tank. Lim et al disclose a water softener system with a heater to heat water in the tank. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a heater as taught by Lim et al in the water softener of Chau since it is well known in the art that heating the hard water in order to enable or accelerate the chemical reactions leading to the precipitation of the scale forming the divalent metal ions.

Claim 21 calls for a "tube length of about 18 inches". The specification contains no disclosure of either the critical nature of this requirement or any unexpected results arising therefrom, and as such this requirement would be arbitrary and therefor obvious. Applicants must show that this requirement is critical. In re Woodruff, 16 USPQ 2d 1934.

Response to Amendment

Applicant's arguments filed on April 30, 2004 have been fully considered but they are not persuasive.

Applicant amends the independent claims to include the feature "a regeneration tank positioned outside the water softener assembly" and states that the cited reference Chau does not teach such a feature. The Examiner respectfully disagrees. Chau discloses that the regeneration tank positioned inside the water softener assembly, but Chau also discloses that "in such prior water treatment systems ... the treatment unit was frequently located separately from the water softener tank (see col. 1, lines 52-56). Therefore, the regeneration tank can be positioned both inside as Chau's invention or outside as disclosed in prior water treatment systems as claimed.

Applicant's arguments with respect to claims 1-34 have been thoroughly considered but are moot in view of the rejections as discussed above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

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the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 27201163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham
Patent Examiner
Art Unit: 1724
July 1, 2004